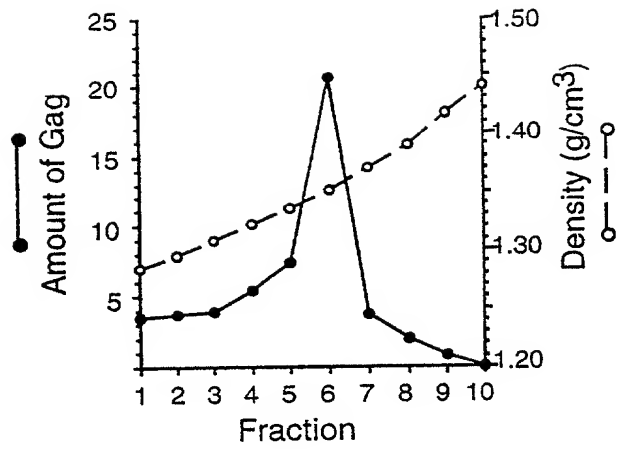
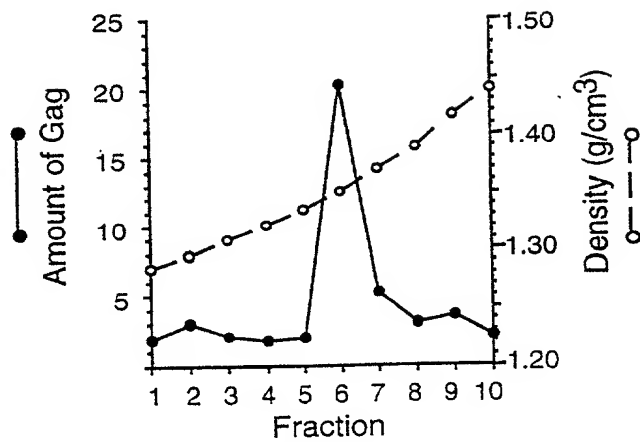
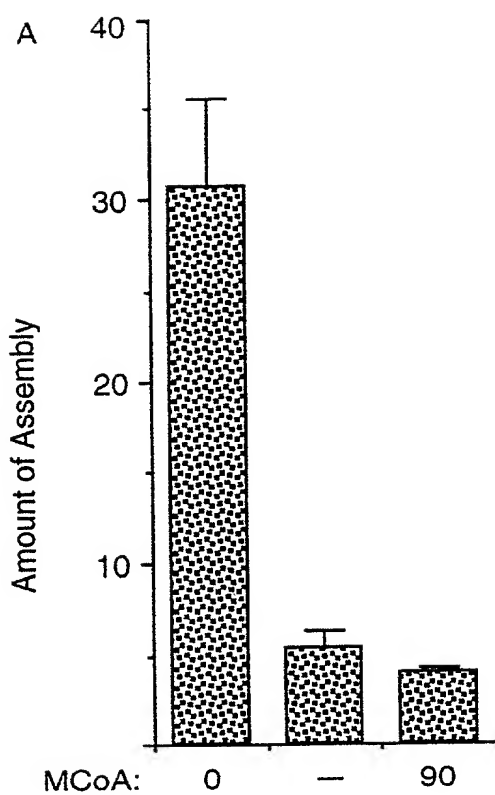


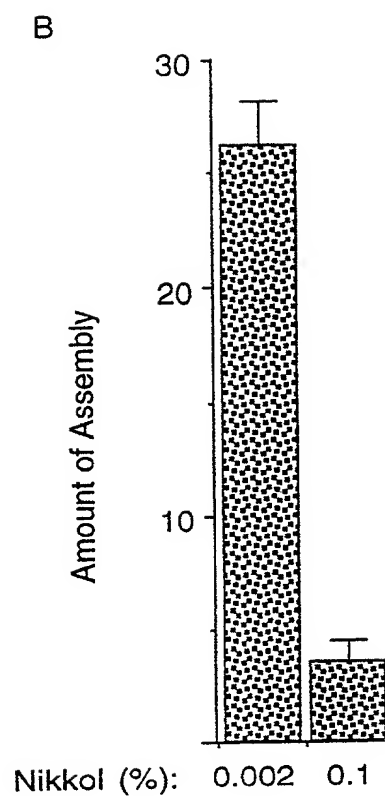
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**Fig. 1A****Fig. 1B**

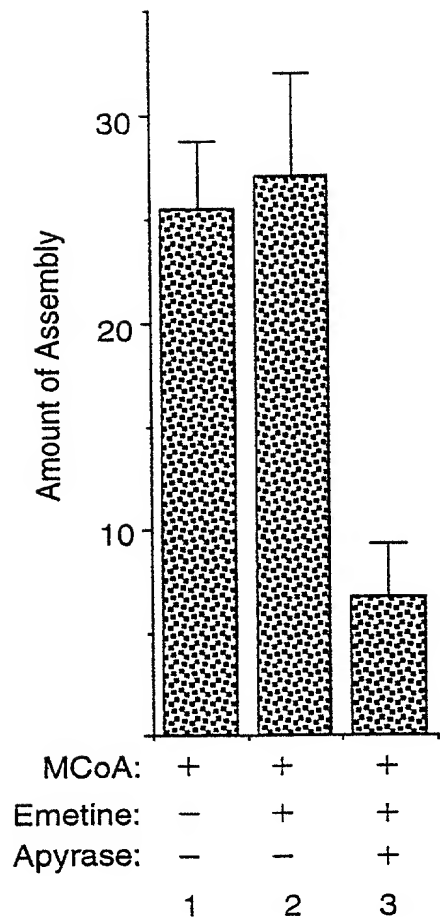
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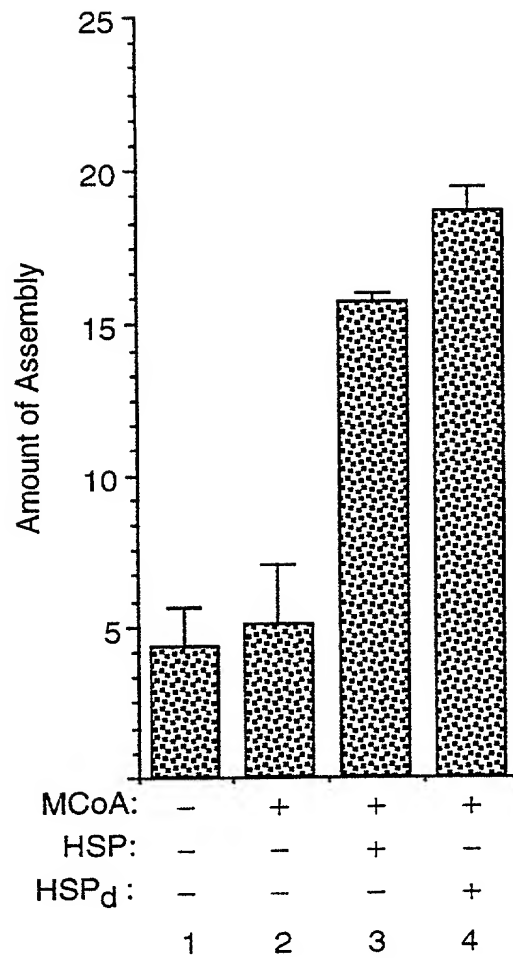
**Fig. 2A**



**Fig. 2B**

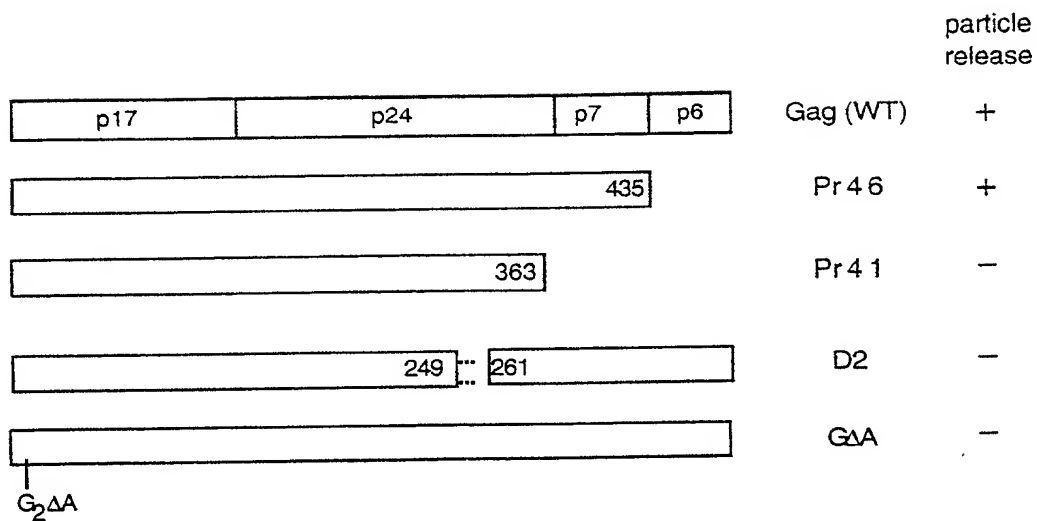


**Fig. 3A**

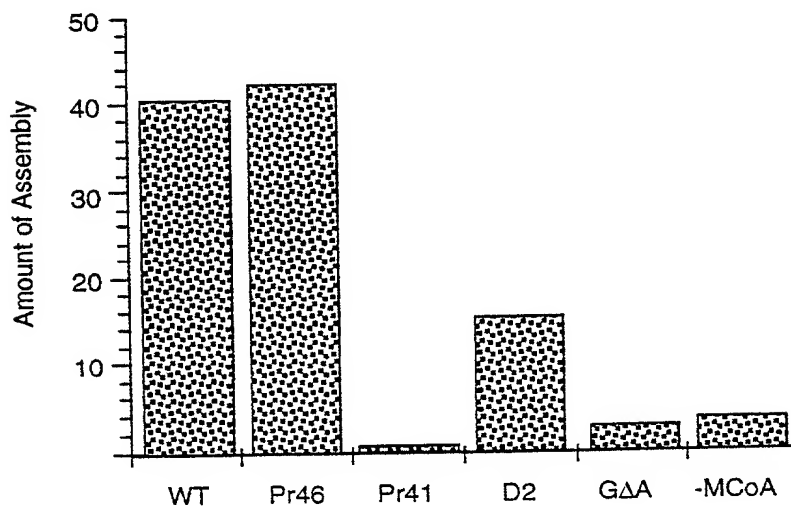


**Fig. 3B**

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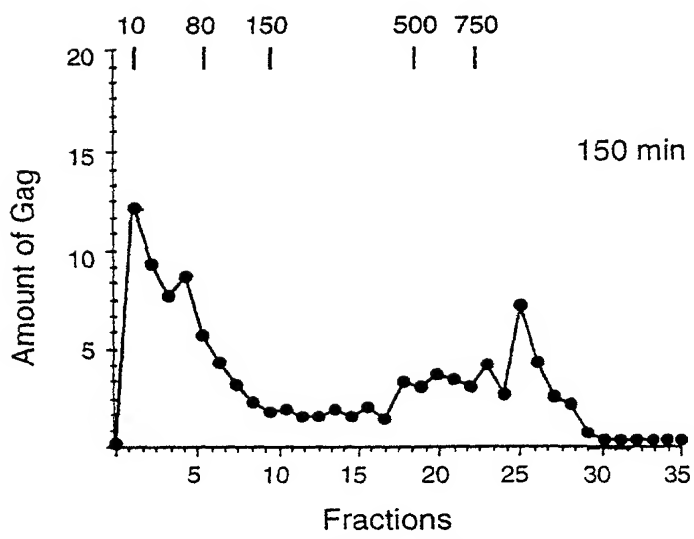
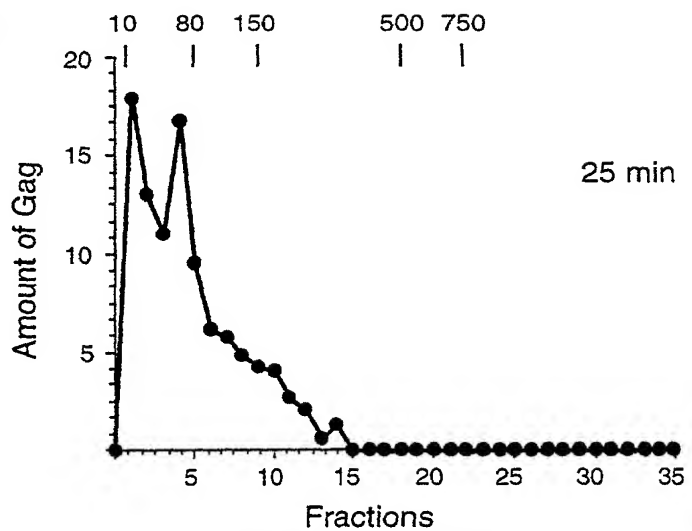
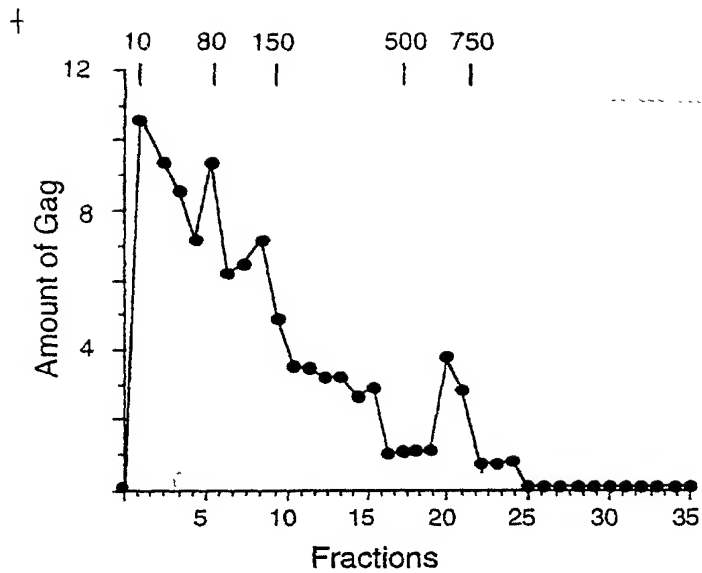


**Fig. 4A**

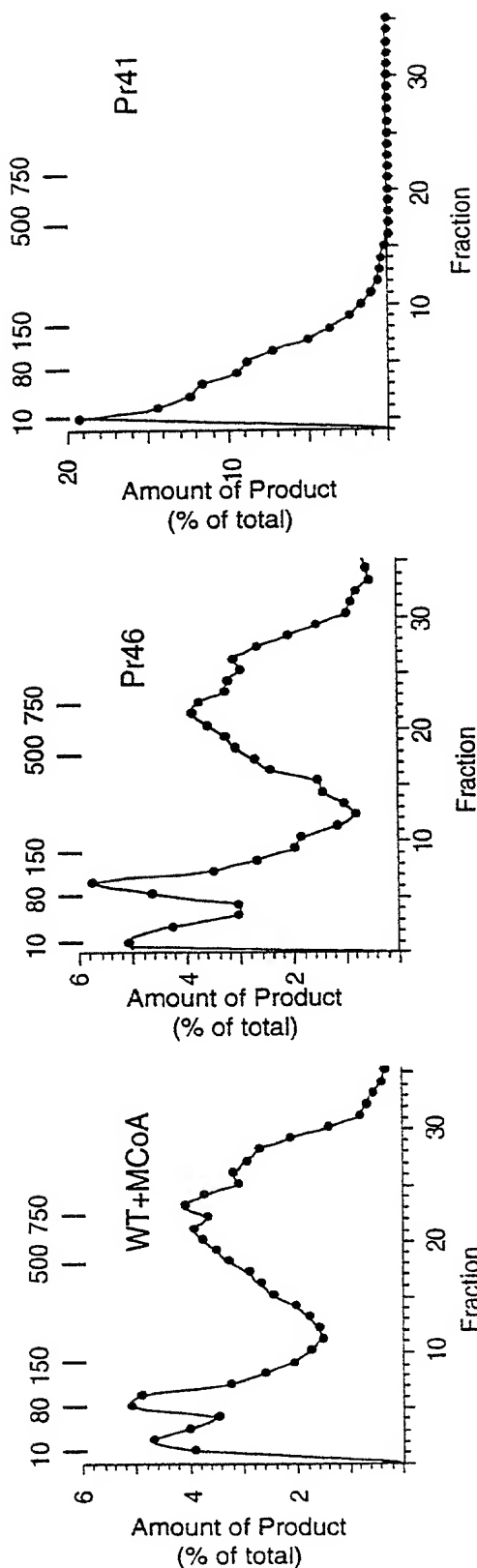


**Fig. 4B**

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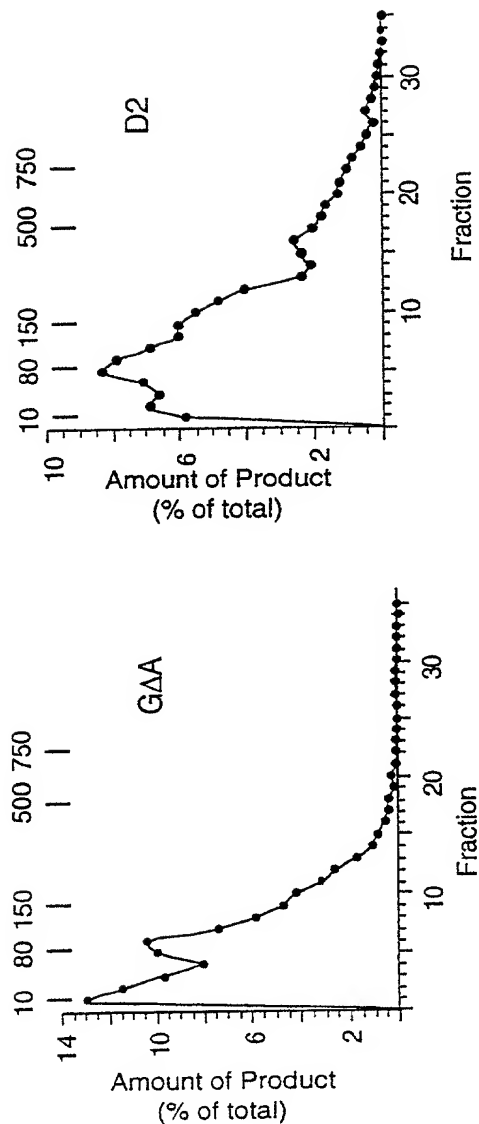
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**Fig. 6A**

**Fig. 6B**

**Fig. 6C**

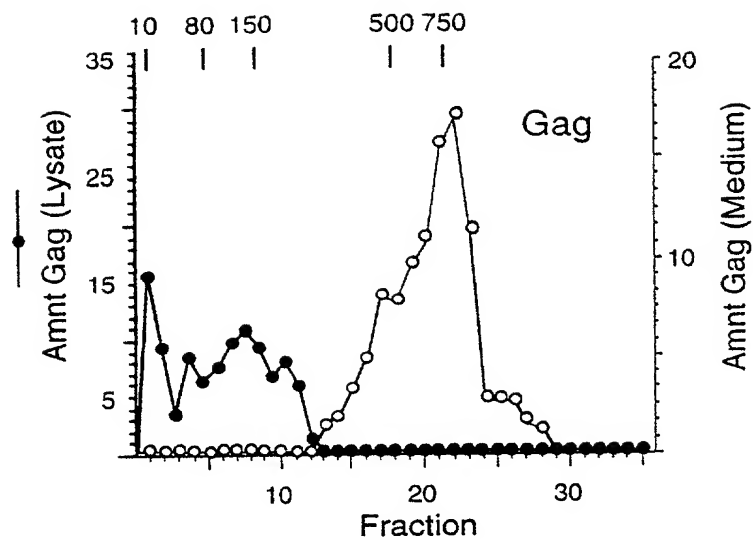


**Fig. 6D**

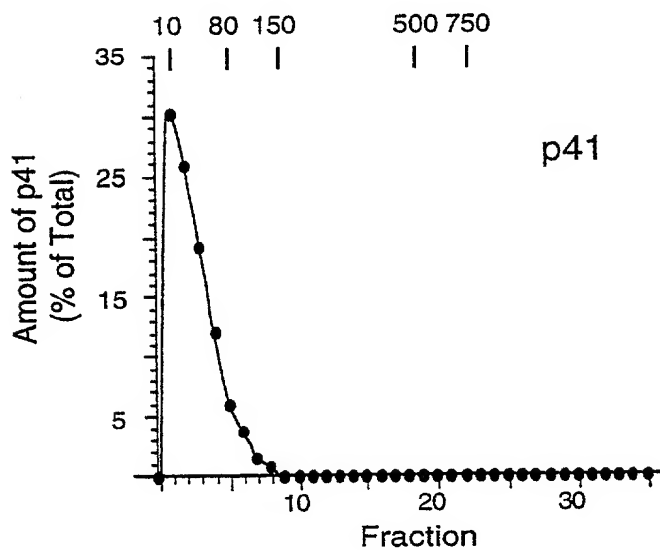
**Fig. 6E**

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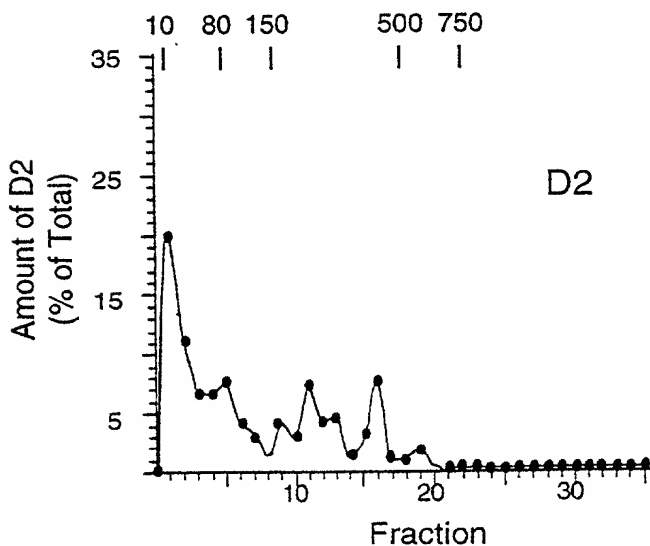
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**Fig. 7A**



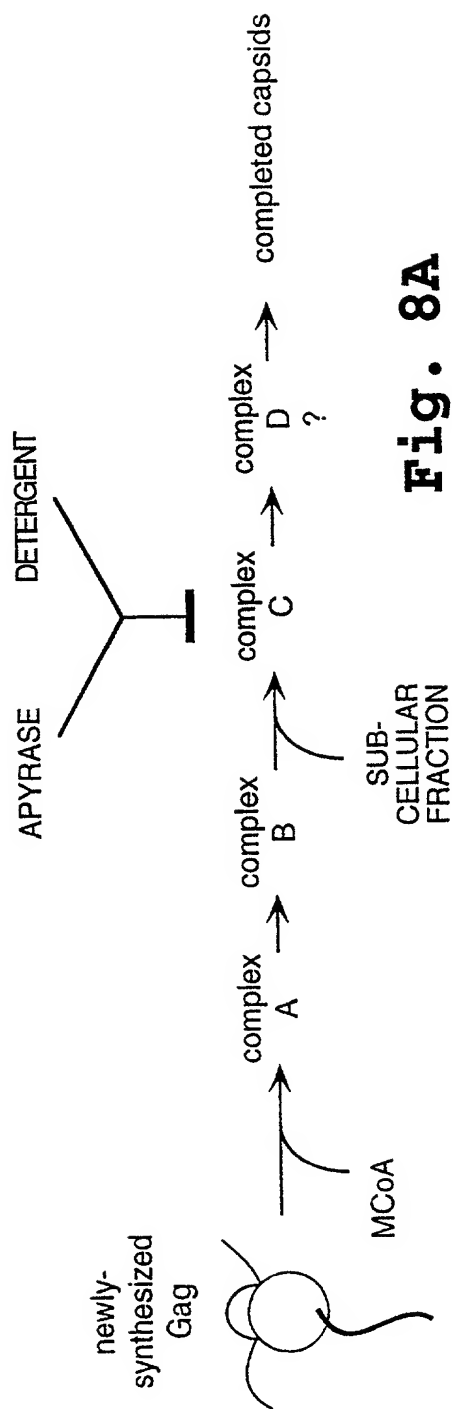
**Fig. 7B**



**Fig. 7C**

+

+



**Fig. 8A**

p41

**Fig. 8B**

GAA  
WT-MCoA

**Fig. 8C**

D2

**Fig. 8D**

WT+MCoA  
p46

**Fig. 8E**

+



HuHP68 1 MADKLTRIAIVNHDCKPKKCRQECKKSCPVVVMGKLCIEVTPQSKIAWISETLCIGCGI  
 WGHP68 1 MADRLTRIAIVSEDCKPKKCRQECKKSCPVVKTGKLCIEVSPVAKLAFISEELCIGCGI  
 consensus 1 \*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*.\*\*\*.\*\*\*\*\*

HuHP68 61 CIKKCPFGALSIVNLPSNLEKETTHRYCANAFKLHRLPIPRPGEVLGLVGTNGIGKSAAL  
 WGHP68 61 CVKKCPFDAIEIINLPKLEKDTTHRYGPNTFKLHRLPVPRPGQVLGLVGTNGIGKSTAL  
 consensus 61 \*.\*\*\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*

HuHP68 121 KILAGKQKPNLKGYYDDPPDWQEILTYFRGSELQNYFTKILEDDLKAIKPYVARFLRLA  
 WGHP68 121 KVLAKGLKPNLGRFKNPPDWQEILTYFRGSELQNYFTRILEDNLKAIKPYVDHIPKAV  
 consensus 121 \*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*

HuHP68 181 KGTVGSILDRKDETKTQAIVCQQLDLTHLKERNVEDLSGGELQRFACAVVCIQKADIFMF  
 WGHP68 181 QGNVGQVLEQKDERDMKNELCVDLELNQVIDRNVGDLGGELQRFIAVAVVQSAEIYMF  
 consensus 181 \* \* \* . \* . \* \* . \* \* . \* \* . \* \* . \* \* . \* \* . \* \* . \* \* . \* \*

HuHP68 241 DEPSSYLDVKQRLKAAITIRSLINPDRIIVVEHDLVLDYLSDFICCLYGVPVPSAYGVVT  
 WGHP68 241 DEPSSYLDVKQRLKAARVIRSLRSNSYVIVVEHDLVLDYLSDFICCLYGKPGAYGVVT  
 consensus 241 \*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*

HuHP68 301 MPFSVREGINIFLDGYVPTENLRFDRDASLVFKVAETAN-EEEVKKMCMYKYPGKKKKMGE  
 WGHP68 301 LPFSVREGINIFLAGFVPTENLRFDRDESLTFKIAETQESAEEVATYQRYKYPTMSKTQGN  
 consensus 301 \*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*

HuHP68 360 FELAIAGEFTDSEIMVVLGNGTGKTTFIRMLAGRLKPD--EG--GEVPVLNVSYKPKQK  
 WGHP68 361 FKLSVVEGEFTDSQIVVVLGNGTGKTTFIRMLAGLLKPDTEGTEVEIPEFNVSYKPKQK  
 consensus 361 \* \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \* . \*

HuHP68 416 ISPKSTGSRVQLLHEKIRDAYTHPQFVTDVMKPLQIENIIDQEVQTLGGELQVRVRLRLC  
 WGHP68 421 ISPKFQHPVRHLLHSKIRDSYTHPQFVSDVMKPLQIEQLMDQEVINLSGGELQVRVALCLC  
 consensus 421 \*\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*

HuHP68 476 LGKPADVYLIDEPSAYLDSEQRLMAARVVKRFLHAKKTAFVVEHDFIMATYLADRVIVF  
 WGHP68 481 LGKPADIYLIDEPSAYLDSEQRIVASKVIKRFILHAKKTAFIVEHDFIMATYLADKVIVY  
 consensus 481 \*\*\*\*\*.\*\*\*\*\*.\*\*\*.\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*\*\*.\*\*\*

HuHP68 536 DGVPSKNTVANSPTLLAGMNKFLSQLEITFRDPNNYRPRINKLNSIKDVEQKSGNYF  
 WGHP68 541 EGLASIDCTANAPQSLVSGMNKFLSHLDITFRDPTNYRPRINKLESTKDREQKNAGSYY  
 consensus 541 \*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*.\*\*\*

HuHP68 596 FLDD  
 WGHP68 601 YLDD  
 consensus 601 \*\*\*

Figure 9

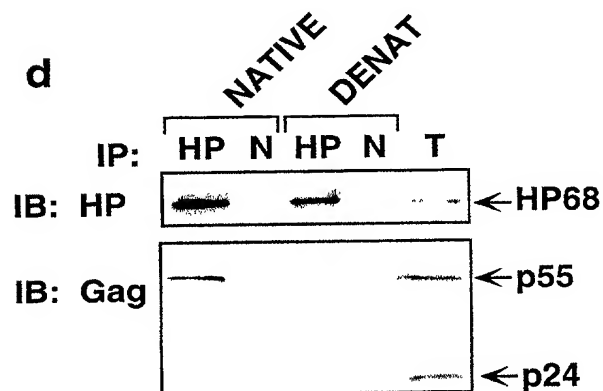
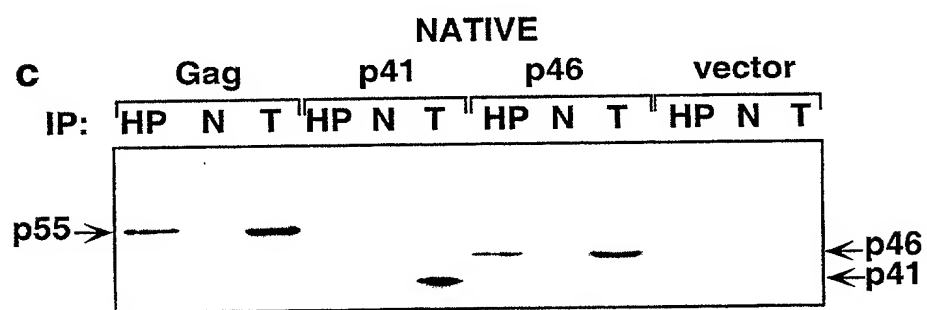
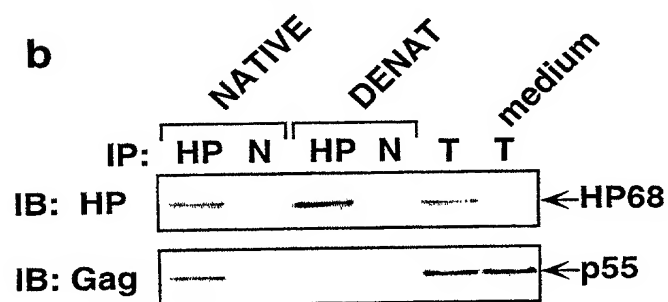
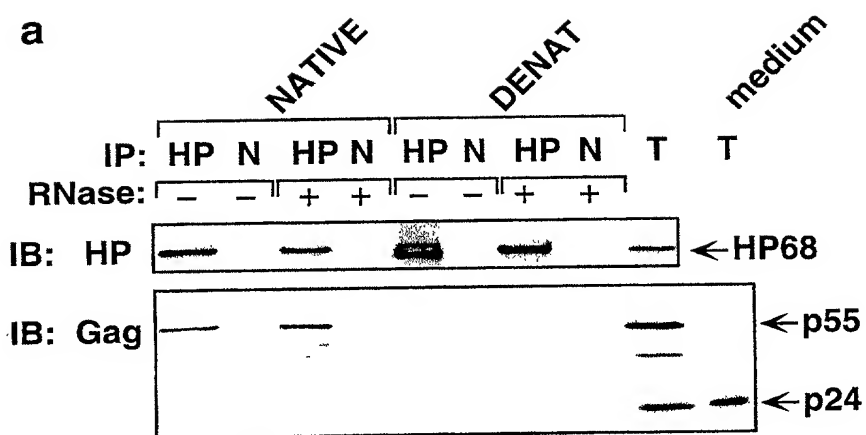


Figure 10

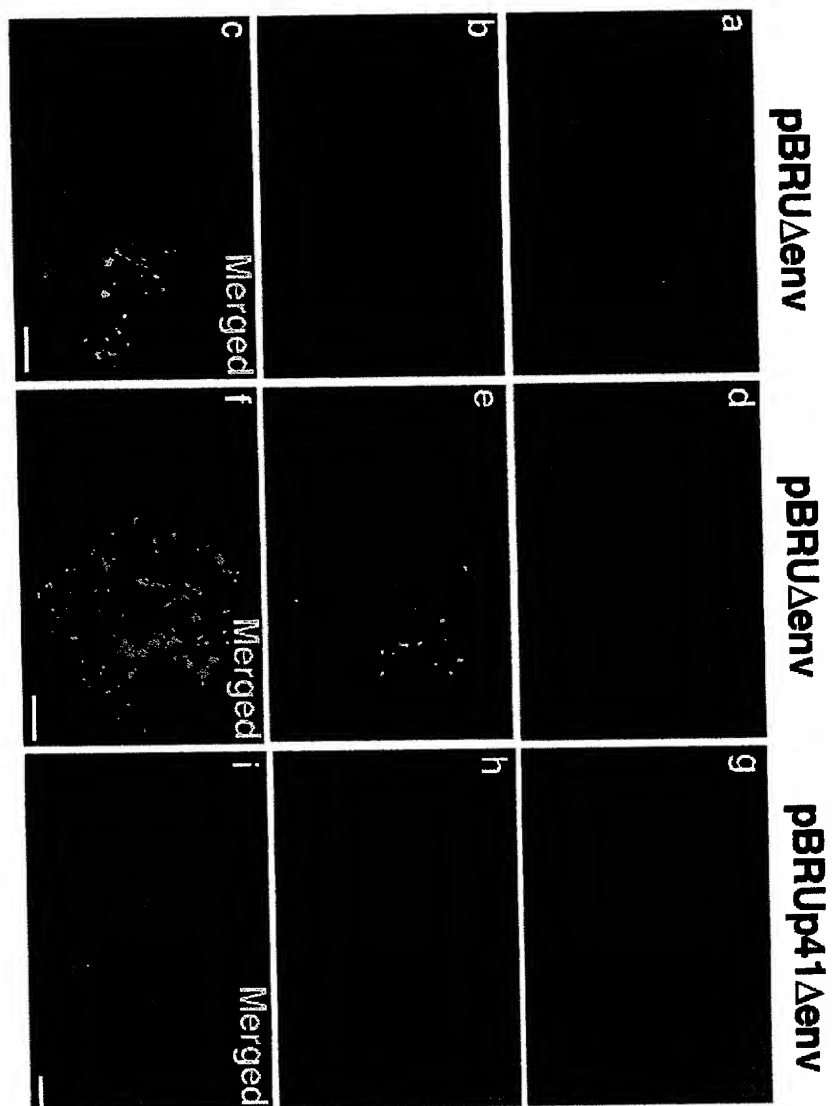


Figure 11

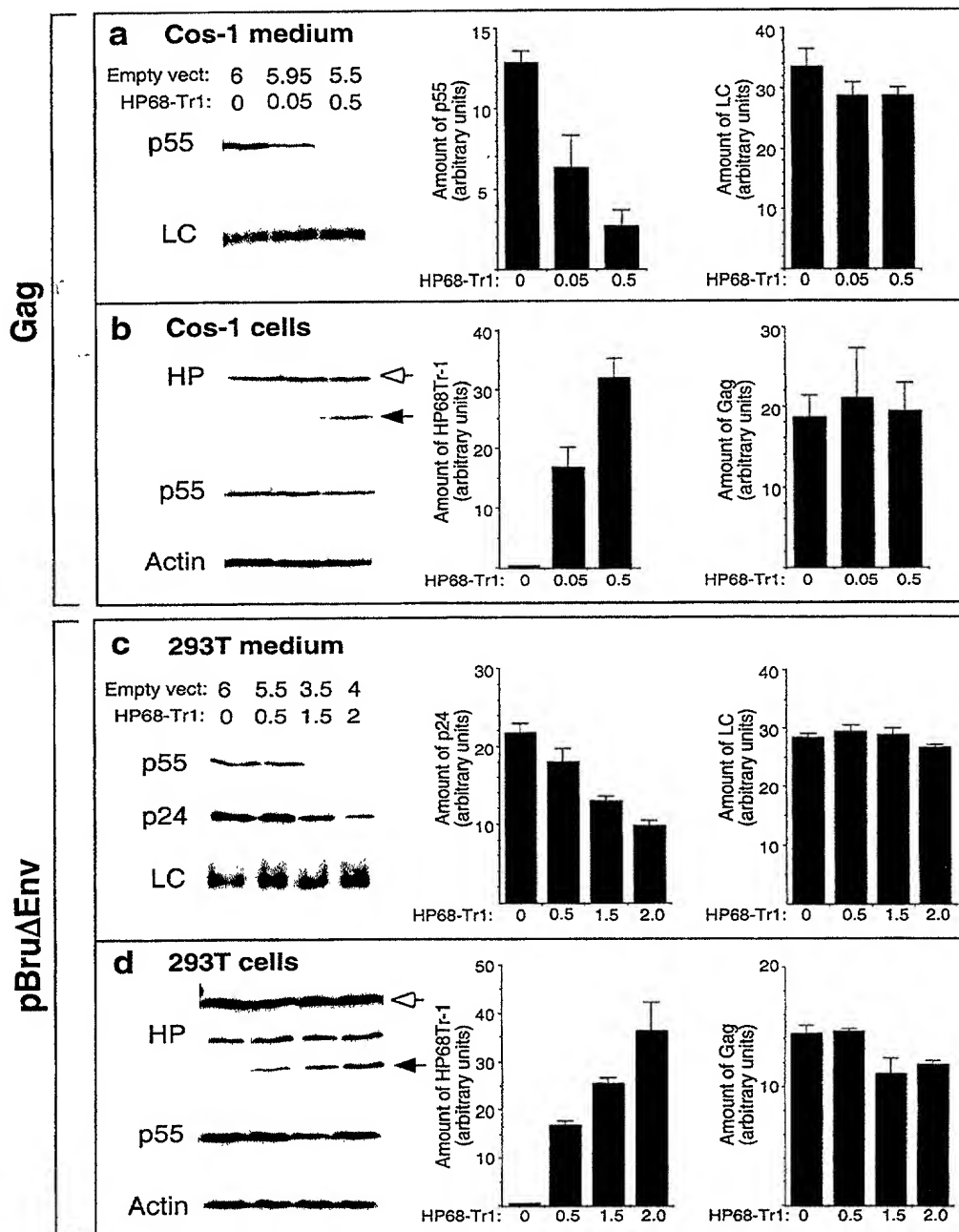


Figure 12

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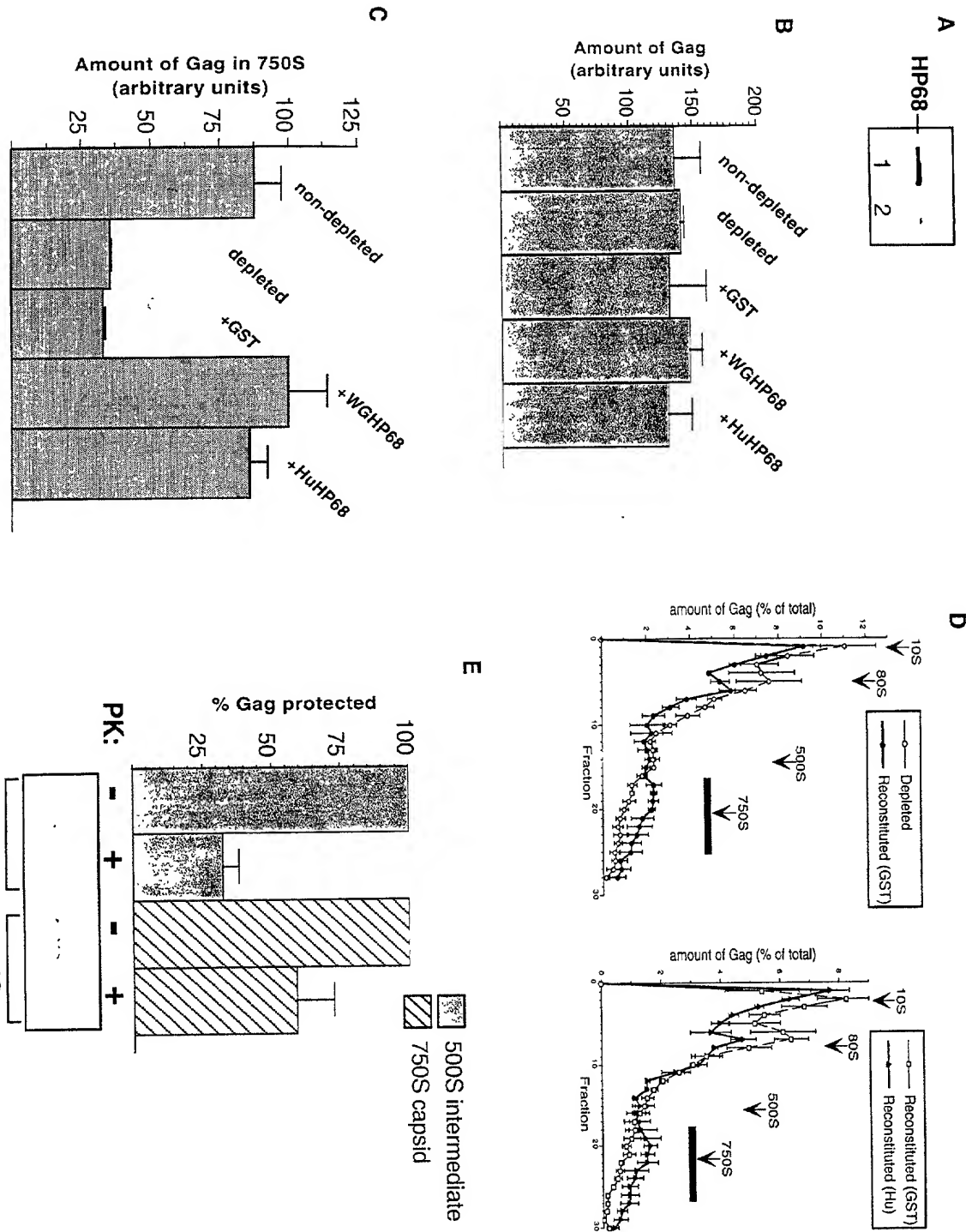


Figure 13

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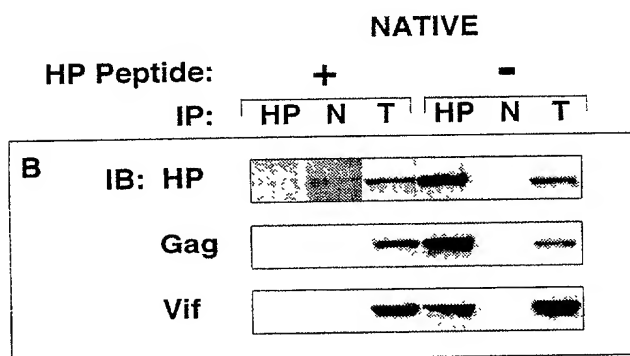
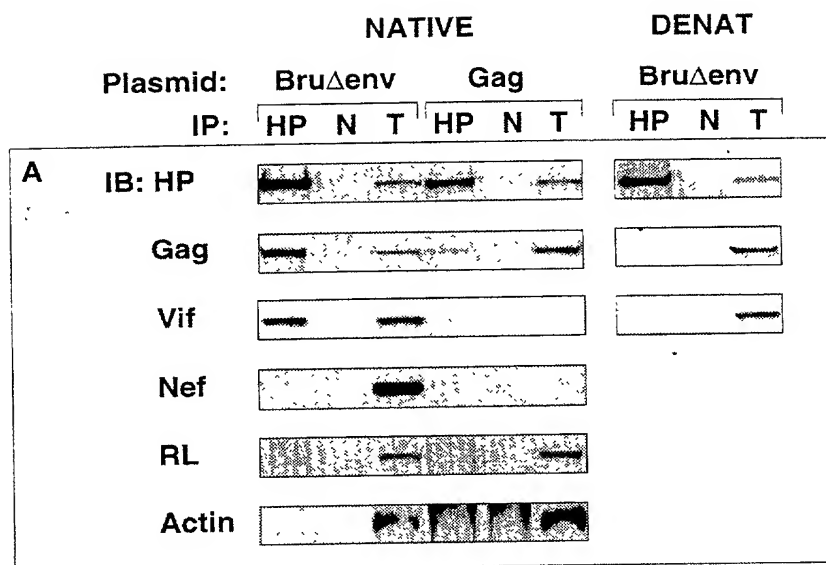


Figure 14

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